BUREAU OF ENVIRONMENT
CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting
DATE OF CONFERENCE: October 18, 2017
LOCATION OF CONFERENCE: John O. Morton Building
ATTENDED BY:

NHDOT
Matt Urban
Sarah Large
Ron Crickard
Mark Hemmerlein
Marc Laurin
Tim Boodey
Doug Locker
Russ St. Pierre
Nancy Spaulding
Jason Tremblay
Tobey Reynolds
Rebecca Martin
Jason Abdulla

ACOE
Mike Hicks

EPA
Mark Kern

NHDES
Gino Infascelli
Lori Sommer

NHF&G
Carol Henderson

US Fish & Wildlife Services
Ian Drew
Paul Casey

Consultants/Public Participants
Jameson Paine

(When viewing these minutes online, click on an attendee to send an e-mail)

PRESENTATIONS/ PROJECTS REVIEWED THIS MONTH:
(minutes on subsequent pages)

(When viewing these minutes online, click on a project to zoom to the minutes for that project)

NOTES ON CONFERENCE:

Postpone Finalization September 20th, 2017 Meeting Minutes
Matt Urban asked the group if it would be ok to postpone the finalization of the September 20th, 2017 meeting minutes as the draft minutes had only been out for a week. The group agreed to postpone the finalization of minutes to November.

Barrington, #41660 (Non-Federal)
The purpose of this project is to place a concrete invert with cutoff walls in the bottom of the existing metal arch pipe.

Doug Locker provided an overview of the project which is a 10'-8 plate pipe arch spanning over Ayers Pond Outlet carrying US202. The drainage basin for Ayers Pond Outlet is 3.16 square miles. The existing structure was originally built in 1978. There were several NHB records in the area of the project site. This project will provide a fish weir at the downstream side which will help maintain connectivity through the pipe.

Slides were shown giving the location of the pipe, the upstream and downstream channels, as well as the inlet and outlet of the pipe. A map was also provided showing the proposed impacts of the project which included rip rap at the downstream end of the pipe and the upstream banks and temporary impacts provided for the cofferdam and stream diversion.

Carol Henderson mentioned that Kim Tuttle had stated that it was a high priority for Blandings Turtles, and it was very important to maintain connectivity which the fish weir would adequately provide.

Mike Hicks asked that, if no trees were to be cut? Doug Locker stated that there would not be any cutting of trees.

Lori Sommer asked what material would be used to create the fish weir. Tim Boodey stated that we would be using stone and mortar to mold the weir. Tim Boodey added that the purpose of using mortar would be to prevent water from passing directly though the stone in order to back water up and through the structure; the intent of the weir.

Matt Urban said the coast guard qualified Ayers Pond as non-navigable for coast guard jurisdiction.

Gino Infascelli and Lori Sommer stated that it was necessary to add a monitoring plan for the fish weir to the wetland application.

Mike Hicks asked if cultural had been checked. Sarah stated that it had not been check yet but it would be prior to the wetland application being submitted.

Matt Urban asked if the impacts due to the fish weir were self-mitigating and further mitigation would not be required. Lori Sommer agreed.

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Eaton – District 3 Project (Non-Federal)
Russ St. Pierre introduced the project to replace the existing 7-foot box culvert carrying NH Route 153 over Snow Brook in Eaton, NH. This is a Tier 3 Stream Crossing with a 5.15 acre drainage area. Snow Brook approaches the culvert from the east and then turns northerly after exiting on the westerly side of the road. Pictures of the existing structure, stream, and surrounding area were presented. Photographs of the culvert's interior showed a section of the structure that has begun to fall in.

Wetlands have not yet been delineated. The Natural Heritage Bureau has been contacted and there are no recorded occurrences of sensitive species near the project area. The project area is located within the 100-year floodplain.

Nancy Spaulding further described the existing condition of the culvert and temporary repairs to maintain its structural integrity. It is not known when the existing culvert was constructed, but photographs show the existing concrete structure to have been built over portions of a stone and masonry culvert. The Department is proposing a full replacement with a larger culvert, but probably not as large as would be fully compliant with what the drainage area would require.

Matt Urban noted the Department would be proposing an Alternative Design.

Mike Hicks commented that the Department would need to coordinate with the ACOE, and needed to follow-up on cultural resources with a possible MOA for a historic bridge.

Gino Infascelli inquired about a second nearby crossing and suggested getting information on that structure.

Nancy commented that she would return in late winter or early spring for further review.

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Meredith – District 3 Project (Non-Federal)
This project was not presented.

Bedford-Manchester, #40731 (X-A004(475))
Jason Tremblay provided a brief description of the project, which consists of the maintenance and preservation of the I-293/Route 101 bridges over the Merrimack River. The work will consist of pavement and membrane replacement and, some minor deck repairs. The expansion joints at Piers 2 and 5 will be replaced. Due to leaking at these joints deterioration has occurred to these piers, which will need to be repaired.

Jameson Paine discussed environmental coordination efforts that have been undertaken. Coordination with NH Fish and Game and NH Audubon Society has occurred due to the past territorial presence of Peregrine falcon on the bridges. Due to the peregrine's presence, DOT's

Bridge Maintenance Bureau, in consultation with F&G and Audubon, installed a nesting tray last year away from the proposed work areas of Piers 2 and 5 to provide the falcons the opportunity to use a nesting area away from the work zone. A recent meeting with F&G and Audubon was conducted to discuss the work and potential impacts to the falcons. It was agreed that the proposed work on the bridge should not be a major concern and that no work under the bridges would occur during a time of year restriction from March 1st to the end of June, if the falcons have nested on the bridge that year. If the falcons were to nest on the piers, or somewhere under the bridge beside the tray, the Department will coordinate with NHF&G and Audubon to schedule the prompt and safe relocation of the nest to the nesting tray located away from the work activity area. Phase 1 work for the eastbound bridge, will be on the south side of the bridge away from the nesting tray. Phase 2 work will be on the north side of the eastbound bridge where the nesting tray is located. However, in both Phase 1 and 2 the nesting tray location will be at a maximum distance from both Piers 2 and 5 (approximately 220 feet) thereby minimizing impacts to the falcons.

No concerns were expressed by the NH NHB as access for construction will be from barges, which will be launched from public boat launch, and from the top of the bridges. No known Northern Long-eared bat roosts within ¼ mile of the project limits have been identified by F&G and an inspection of the bridges did not identify any usage of the bridges by the bats. No trees greater than 3 inches in diameter are proposed to be cleared.

A DES Shoreland permit by notification will be completed, but there will be no need for a Wetlands Permit.

Mike Hicks inquired about any need for a coast guard permit. Matt Urban replied that the coast guard has been contacted and the proposed work will not require a bridge permit, but standard stipulations will need to be met. M. Hicks also asked whether the National Marine Fisheries Service (NMFS) had concerns with the project. Mike Johnson at NMFS stated that as the project does not involve work in the river, there is no adverse effect for Atlantic salmon or for any other species. Therefore, there is no requirement for a consultation with NMFS. M. Hicks stated that no Corps permit would be required.

Carol Henderson cautioned that falcons are territorial if fledgling are present. J. Tremblay stated that the location of the nesting box should shield the work area from the falcons.

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Errol, #41069 (X-A004(565))

Tobey Reynolds presented slides sharing the evolution of the erosion issue on Route 16 adjacent the Magalloway River and subsequent design of the Errol 41069 project. He explained that the Magalloway River is dam controlled in this area and that the project area is within the Umbagog National Wildlife Refuge. In 2011 the slope failure required the Department to temporarily relocated Route 16 away from the Magalloway River onto Umbagog National Wildlife Refuge property. Our partners at the U.S. Fish and Wildlife Service were accommodating and agreed to the temporary solution of moving the road by around 14 feet. The Umbagog National Wildlife Refuge Manager, Paul Casey, and the Deputy Refuge Manager, Ian Drew, have been participating as partners in the development of the project design.

T. Reynolds shared photos on the evolution of the slope failure. He shared that the slope is still moving, but is not as active as it has been in the past and some vegetation is growing on the slopes. T. Reynolds described that a river study was conducted with sonar and the Magalloway River is very deep at the project location, the slope failure area goes approximately 50 feet to the toe of the slope. Due to the depth and steepness of the bank, stabilization to move the road back to the original location would be expensive. T. Reynolds described some of the shoreline stabilization alternatives that have been investigated and potential issues and benefits. The soil in this area has been found to be quite weak, so some of the traditional treatments, like stone riprap, would not be ideal unless the treatment extend to the bottom of the river. The Design team also considered a gabion mattress slope stabilization or steel sheet piles, each have their challenges due to cost an constructability due to the steep slope. There is a second area, just south of the slope failure, where the slope is showing signs of some movement.

The project team visited the project site and met with the Umbagog National Wildlife Refuge (Refuge) Manager, Paul Casey, and the Deputy Refuge Manager, Ian Drew. The Refuge Managers were in favor of moving Route 16, as they saw this as a more permanent solution than merely slope stabilization. The Department's Front Office also favors the concept to move the road away from the Magalloway River. Slope stabilization is being considered in conjunction with the road movement. T. Reynolds shows slides with plans for a 1,200 foot long minor shift of the roadway that would have approximately 1,970 square feet of wetland impacts, 250 linear feet of bank impacts and 207 linear feet of channel impacts. He also showed a major shift option, which is 2,500 feet long that would have approximately 25,210 square feet of wetland impacts, 250 linear feet of bank impacts and 207 linear feet of channel impacts. T. Reynolds commented that the geometry of Route 16 through this area is quite curvy and lends itself to a shift. He commented that there is a fairly sharp curve at the south end of the project. The major (larger) shift would likely make the geometry better. T. Reynolds commented that the major shift is a bit out of the current intended project scope.

If the road is shifted, there are additional options for stabilizing the bank, such as, flattening and vegetating the bank. A consultant, McFarland Johnson, and their sub-consultant, Milone and MacBroom, have prepared a draft Technical Memorandum to summarize their findings and recommendations for the permanent repair and slope stabilization of slope failure that occurred along NH Route 16. In the report McFarland Johnson and Milone and MacBroom explained that the slope failure was not due to water velocity in the Magalloway River, the River's velocity is actually low in the area. The issue is caused by the weak soils and the steepness of the bank. Possible stabilization recommendations included creating a more gradual slope and revegetating the area, stone stabilization with seeding, or a log jam grid. The Design team has requested that the consultant evaluate moving the road away from the Magalloway and leaving the road to naturally evolve to a stable slope. Jamie Sikora commented that it would be preferred to do some type of slope stabilization to protect the investment of moving the roadway.

T. Reynolds inquired of the group which stabilization would be preferred and explained that the cost of mitigation for bank impacts is a concern. Lori Sommer explained that she recently attended the Mid-Atlantic Stream Conference and the log jam/root wad method has been very successful and is preferred. She said this option would not require mitigation as it would be self-mitigating. She mentioned that she would send T. Reynolds materials about the method. L. Sommer also commented that EcoTone is a leader in the application of this technology and it has been used by Trout Unlimited and for an ARM fund project. L. Sommer explained that there is no maintenance needed for this log jam slope stabilization method. T. Reynolds explained that there will be trees removed for the road shift and these trees would be utilized, if the log jam method is selected. M. Hemmerlein commented that is takes a long time for trees to deteriorate underwater and L. Sommer commented that there can be plantings among the root wads. T. Reynolds explained that the dam can drop the water level by around 2 feet below the high water elevation and this is

the elevation being recommended for the log jam method. Gino Infascelli suggested coordinating the dam owners (Brookfield Power). They may lower the dam more during scheduled maintenance. The group discussed whether debris in the River might be caught in the log jam and cause damage. L. Sommer commented that the trees used are fairly long and a secure grid is generally constructed. T. Reynolds reiterated that the water velocity is low.

J. Sikora commented that the Refuge is a Section 4(f) resource. If the net impact is neutral, this project could be a deminimus impact. Paul Casey explained that the process has been started within USFWS for the land transfer. P. Casey also commented that the Refuge is not interested in picking up a problem area, meaning if the slope is not stabilized and would require continued maintenance, the Refuge would not want to acquire the area. Tom Geser, the Umbagog Realty Specialist has contacted the project design team to begin discussions. J. Sikora commented that the land transfer can be done individually or as a larger program, as was done with the White Mountain National Forest.

The group discussed the potential construction sequence, which would probably include: maintaining traffic while the new (shifted) road is constructed, stockpiling of trees, shifting traffic, and removing the old road and installing the log jam slope stabilization. T. Reynolds commented that the moderate is the preferred option because it meets the purpose and need of the project. Also, the moderate shift proposes less than 10,000 square feet of wetland impacts. Matt Urban commented that since the bank treatment is self-mitigating and the moderate shift is less than the threshold for mitigation, this would not require mitigation. M. Urban commented that the major shift would exceed the threshold and would require mitigation. L. Sommer commented that the wetland impacts may need to be considered to be cumulative with the Dummer project on Route 16. Therefore, mitigation for the wetland impacts for the Errol 41069 project should be considered. L. Sommer commented that the root wad/log jam opportunity could offset some of the projects' impacts. The projects are 5 miles apart. Mike Hicks commented that he could see justification for evaluating the wetland impacts together. M. Urban commented that if they are considered together, the ~1,970 square feet of wetland impacts would require mitigation.
**Not noted during meeting, but relevant- the Dummer Route 16 project is on the Androscoggin River and the Errol Route 16 project is on the Magalloway River.*

Refuge Manager, Paul Casey, commented that there have been several truck rollovers, at least one resulting in gasoline leaking onto Refuge land due to the steep curve at the southern portion of the project area. The Refuge management would prefer the major shift option to improve safety, but does understand that cost may be a limiting factor in the decision. L. Sommer commented that this is a good point, if the major shift is a better long term solution and would improve safety, consider that credit may be given for the log jam shoreline stabilization. The group discussed that traffic moves quite fast through the area, with a posted speed of 50 mph. T. Reynolds commented that with the smaller shift, signage could be improved to alert drivers to the curve. He also reminded the group of the purpose and need of the project. If the bank was stable, there would not be a project for this section of roadway.

M. Hemmerlein commented that the design team should consider whether it is possible to move ahead with a plan to acquire the area needed for the major shift, but move ahead with a design and construction of the moderate shift. If needed in the future, the Department would be better positioned to build the major shift. T. Reynolds said this is a good question. T. Reynolds commented that he thinks the moderate shift would result in a stable condition for many years. T. Reynolds confirmed that the geometry of the road and safety concerns, not the stability of the bank, would be the reason for the major shift. Mark Kern commented that he would be comfortable with either shift option. He said it was good that the bank impacts will be cancelled out by the stabilization. He does not have a preference.

J. Sikora commented that it might be good to plan for the major shift, conduct the land swap, and then select the alternative based on available funds.

M. Urban commented that he would like to have a future discussion regarding whether the Dummer and Errol project impacts should be considered to be cumulative.

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Dummer, #16304A (X-A003(835)

Mark Hemmerlein began the meeting by informing the resource agencies that a group from DES, Fish & Game, TNC, and DOT visited the project site on October 16, 2017. Those who attended were: NHDOT - Mark Hemmerlein, Matt Urban, Sarah Large, Jennifer Reczek, NH DES - Gino Infascelli, TNC - Pete Steckler, NH Fish & Game - John Magee, Dianne Timmins, Andy Schafermeyer. (Individuals that were invited but not able to attend were: Lori Sommer, Mark Kern, Ruth Ladd & Mike Hicks).

Jennifer Reczek added information that = their upcoming public hearing for the road layout is to be on November 6, 2017. Mark indicated that the goal of today's meeting was determining the 404 mitigation for the project prior to the scheduled Public Hearing on November 6, 2017.

M. Hemmerlein indicated that the field visit group started at the south end near Muzzy Hill Road and looked at the Robbin's Brook crossing and then walked up the stream to look at the habitat and what species might use or were currently using the brook. The group then continued north along NH 16 to look at the areas of wetland impacts to the west and the areas to the east where the road will be shifted and impervious area removed and re-vegetated. By the end of the day there was a general consensus that the DOT would work to address the Robbin's Brook crossing as mitigation to improve hydraulic compatibility and wildlife passage at that location, however it was discussed that it was not a location that would greatly benefit brook trout due to the long flat section at the confluence with the Androscoggin River.

Jennifer Reczek said that the DOT will try to address the concern of lengthening the 60 in. culvert and have considered a three sided box or arch spanning 10-12 ft. with a natural bottom.

Lori indicated that she had discussed with Ruth Ladd (ACOE) and Mark Kern and they agreed the crossing upgrade could be appropriate mitigation but have not done the math on how much.

The Natural Resource Agency group then focused on the proposed vegetated buffer to the Androscoggin River. The buffer would be placed where the existing roadway currently sits and would be vegetated with material from the west side of the existing road. Gino and Lori indicated they would prefer re-using onsite vegetation and noted successes at the NH Motor speedway in Loudon with Stoney Ridge Environmental who were instrumental in that success. Dan Prehemo noted that traffic control and the construction sequence would need to be reviewed to make the vegetation transplanting a success. This would create some challenges with construction, phasing and costs associated with those decisions that the Department indicated they wanted to look into more. Lori noted that the NH Wetland Bureau was willing to provide 12-13% credit for thiseffort

based on the pollutant loading analysis regarding water quality improvements to the Androscoggin River. She indicated that the Androscoggin is not impaired in this location and so with talking with Mark Kern and the Corp this is what they felt was appropriate for shifting the road. She also indicated that the transplanting of the wetlands material, in addition to moving the road, DES and others could consider allowing for more credits for this additional work. Lori indicated that this mitigation package would definitely be a "menu" of mitigation efforts; the culvert span, the planted buffer in addition to the determined credit for moving the road, and an ARM payment. Matt added that it was the Department's thought that we would apply the buffer credit to the total mitigation amount and then use the remaining mitigation amount to construct the 12 ft bridge. Matt indicated that the amount remaining after applying the 12% credit was $600,000 and that the Department would like to and would need that amount to build a bridge at the Robbin's Brook crossing. It was estimated a 22 ft. span (compliant sized bridge) would cost $1 million. So there would likely not be any money left over to pay into the ARM fund with any upsized structure

Mark Kern asked if there were design alternatives and cost estimates for the Robbin's Brook crossing. Lori agreed that it would be good to see those estimates. Matt outlined the alternatives the Department has considered: leaving the existing 60" and adding an extension, that the Department has looked at the price of a fully compliant structure 22' span (which was indicated to be beyond what the project's mitigation costs would be and not constructible due to vertical alignment needs for that span bridge), so the department would like to evaluate 12 to 14 ft span bridges. Gino asked and indicated that he thought the bankfull width was 16 feet on average; Matt added that the average wetted channel is about 14 feet. Gino asked that we shoot for the 14 or 16 foot (which does not include the plus 2 feet on both sides) but that shooting for one of those numbers would be great.

Kevin Nyhan noted that the project was going to Public Hearing with a primary goal of finding the necessity of the layout and begin the Right-of-Way process and that the DOT will discuss openly at the hearing that the Department is looking to improve the Robbin's Brook crossing as part of the mitigation package, the pollutant loading credit, possible soil and plant transplanting, and possibly an ARM payment, but with the general idea that these are the proposed ideas and the Department is continuing to work towards a final mitigation package Environmental concerns and mitigation are brought up at the hearing and that these are options and should not and would not prevent changes to be made.

Carol Henderson added some comments about the Robbin's Brook crossing replacement. She indicated that yes any upsizing to an undersized crossing is an improvement, but that she didn't see how this will be a substantial improvement for wildlife from the current extent that the crossing currently is used. She said that information from the Department of Fish & Game's field crew indicated that there was a concern that a culvert upgrade is of minimal benefit for brook trout. Mark Kern and Carol added that from an investment to reward perspective in regards to improvements to wildlife, upsizing the crossing from the existing 60" to a 12 ft, 14 ft, 16 ft span bridge the benefit and improvement should not be "tagged" specifically to wildlife improvement because it is minimal. Sarah Large added that upsizing the crossing would be providing hydrologic benefit which is a factor to be considered when improving a crossing. Gino asked about efforts to minimize wetland impacts and the engineers indicated they would look at minimization after the

Public Hearing prior to submitting the permit applications. Mark indicated they hope to have the application submitted in about 6 months

This project has been previously discussed at the 10/15/2017 and 7/19/2017 Monthly Natural Resource Agency Coordination Meetings.